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Our

PUBLIC LANDS

BUREAU OF LAND MANAGEMENT



OUR PUBLIC LANDS . . .



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DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

Washington 25, D. C.

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500 million acres of land that belong to us and to our neighbors and to all the people of the United States . . . public lands that are rich in natural resources . . . timber, rangeland, water, minerals, and land for every use . . . "active acres" that must be carefully and wisely managed for the welfare of the Nation . . .

As a forum for the exchange of ideas and information on the development, utilization, and conservation of the resources on public lands, this periodical contains no copyrighted material. If pictures or material are reprinted, a credit line should be given OUR PUBLIC LANDS and the Bureau of Land Management.

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Bureau of Land Management surveyors do not let the weather keep them from their job. This picture shows a survey camp at Mile 38 with Mount Foraker in the background. Where is the mountain? In Mount McKinley National Park, Alaska. This picture was taken about 1936 when the boundaries of the park were being surveyed by the Bureau of Land Management.



RESHAPING PUBLIC LAND POLICY

by ORME LEWIS, *Assistant Secretary*

"In my State of the Union message, I called attention to the vast importance to this Nation now and in the future of our soil and water, our forests and minerals, and our wildlife resources. I indicated the need for a strong Federal program in the field of resource development. At the same time I pointed to the necessity for a cooperative partnership of the States and local communities, private citizens, and the Federal Government in carrying out a sound natural resources program. . . ."

This statement made by President Eisenhower in his first historic State of the Union message provides the guideline for reshaping public land policy.

So that the partnership may have full knowledge of present and proposed lands programs, it is necessary that we set forth some of the ways that we believe policy can be reshaped to meet the needs of the States, local communities, and the great and increasing number of private citizens who are users of the public domain.

I will not attempt in this short article to cover all points on public land policy. Nor will I look ahead and call attention to changes which may develop with the growth of our partnership.

In the brief space allotted, let us consider six major points: (1) Decentralization, or as it is often aptly termed "grass-roots management"; (2) retention and disposition of public lands; (3) surveys, prerequisite to land use and disposal; (4) sharing responsibility in range use and improvement with proper emphasis on a dynamic soil and moisture program, and (5-6) new phases in forest and minerals policy.

If we are to accomplish a more responsive form of management it is obvious that decentralization is the better policy. Such decentralization will be accomplished principally by a redelegation of authority to the field so that those men who have full knowledge of grass-roots needs will be in a position to act.

We must, however, sound a warning note before we leave this point on authority. The Congress has adopted numerous acts setting down the rules under which public lands are to be made available for use by individuals, State, local, and Federal

Governments. These acts include homestead, desert land, small tract, public sale, recreation, exchange measures and a multitude of others in the thousands of laws governing administration of the public domain.

In carrying out the congressional mandates contained in these acts it will be the policy of the Department to recognize the intention of Congress as embodied in each of the laws. We will not impose upon the intentions of the Congress the ideas of anyone in the Department who may be charged with the duty of acting upon applications made under authority so granted.

In other words, in considering applications, we will at all times avoid any tendency to strain the announced intention of the Congress to the end that applications be granted or denied. We will consider such applications solely on the basis of whether the application comes within the requirements laid down by the Congress. It is recognized that such acts do grant what might be considered discretionary powers to the Department. An example of such is the requirement that we classify the land to determine its best and highest use.

This leads us to our second point which is the stating of a general policy on retention and disposition of public lands. Our general policy will be to permit the disposal of lands that are isolated in nature and not susceptible of satisfactory management by the Department; to dispose of odds and ends of land in areas in which Government holdings have presently been reduced to a minimum; to retain watershed areas except in those rare instances in which States or local governments are capable of assuming the management of such areas in the varied uses to which watersheds can most satisfactorily be put, such as grazing, wildlife, soil conservation, recreation, and the like.

Other examples where lands might well be classified for disposition would be forest areas of very small size, isolated in nature and not under any management program. Some of these forest lands might far better fit into programs of those

(Continued on page 16)

WANT TO LEASE FROM UNCLE SAM?

by BERTRAM F. LINZ, *Washington Editor, The Oil and Gas Journal*

Excerpts from an excellent article which appears in the August 24 issue of the *Oil and Gas Journal* are here reprinted with the permission of the journal and the author, Mr. Linz:

Administration of the oil, gas, and mineral resources of the Federal Government's public lands is vested in the Interior Department and conducted through the Bureau of Land Management and the Geological Survey.

The regulations for operations on the public lands are based on the Mineral Leasing Act of February 25, 1920, as subsequently amended. The act applies to all public lands except those situated in national parks and monuments; Indian reservations; incorporated cities, towns, and villages; or naval petroleum and oil-shale reserves. The department, however, also handles the leasing of Indian lands and acquired lands turned over to it by other Federal agencies.

Because in the leasing of public lands the Government acts in the capacity of landlord rather than as a purely regulatory body, it is necessary

to have a procedure for the granting of leases as well as regulations for operation under the leases.

Leases on the public lands may be secured only by citizens of the United States, associations of such citizens, corporations organized under the laws of the United States or any State or territory or, in the case of oil, oil shale or gas, municipalities. Aliens may not acquire or hold any direct or indirect interest in permits or leases, but may own stock in corporations holding them if the laws of their country do not deny similar or like privileges to United States citizens.

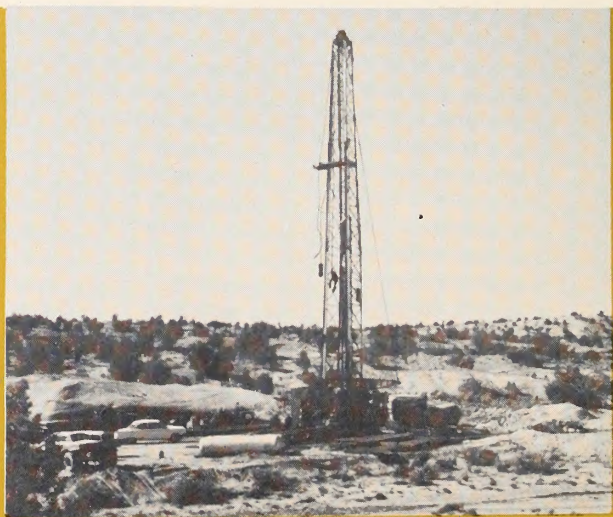
The granting of a permit or lease for the prospecting, development, or production of deposits of any one mineral does not preclude the issuance of other permits or leases on the same land for deposits of other minerals, with suitable stipulations for simultaneous operation.

All lands subject to disposition under the act which are known or believed to contain oil or gas may be leased. When lands are within the known

(Continued on page 22)



MULTIPLE USE. Livestock grazing within large Loco Hills, N. Mex., oil field.



DRILLING. Rotary drilling of gas well in San Juan Basin, northwest New Mexico.



SUMMER HOME. A 5-acre tract home near Hot Sulphur Springs, Colo. Patented in 1949 after improvements were constructed under lease issued in 1943.

A REALISTIC LOOK AT SMALL TRACTS

by KARL S. LANDSTROM, *Chief, Branch of Research and Analysis*

Articles about small tracts in nationally circulated magazines have captured the imagination of the American public. In this day of crowded cities and high rents the dream of acquiring a homesite from the Government for as little as \$10 per acre is apt to thrill the average person. Hundreds of people write Bureau of Land Management offices daily. Experience has shown that few of them will actually acquire a tract and if they do they probably will not get exactly what they wanted.

As Director Edward Woozley has stated: "Most people imagine they'll get a cold stream, green grass, and all that. They are more likely to end up with plain desert."

Most of the higher elevation forested public domain in the West has been reserved in national forests. National forests and certain other kinds of reservations do not come under the Small Tract Act.

The Small Tract Act authorized the Secretary of the Interior to lease or sell to an individual a tract of surveyed public lands not exceeding 5 acres, as home, cabin, camp, health, convalescent, recreational, or business sites. The act applies to the continental United States and Alaska. The tracts may not be leased or sold to corporations or associations.

Frustrating to most easterners who read about small tracts is the fact that no small tracts are available in the States in which they live or nearby States. There was never public domain in any of the original 13 States or States created from them nor in Texas. No public lands remain in Missouri, Illinois, Indiana, Iowa, and Ohio. Some remnants exist in Alabama, Arkansas, Florida, Kansas, Louisiana, Michigan, Minnesota, Mississippi, Nebraska, Oklahoma, Wisconsin, and the Dakotas. However, the only tracts that are available for immediate lease are in the Far West.

Some of the better potential small tracts are located in areas that have never been surveyed under the Government's cadastral survey system. But even where surveyed, most of the public lands have not been examined, and this must be done before they can be classified and opened for small tracts. The demand for tracts is mounting faster than the Bureau can lay them out. On June 30, 1953, the Bureau had on hand 9,671 lease applications in various stages of processing.

When individuals are advised by the land office that no small tracts are immediately available in the area of interest, but that they may seek and apply for an unclassified and unopened tract on their own initiative, they sometimes feel frustrated because of unfamiliarity with methods of finding or identifying such a tract. One individual wrote:

(Continued on page 20)

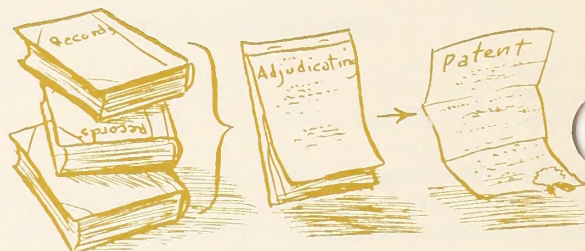
SPEEDY SERVICE ON PATENTS

by JAMES A. BARR, Chief, Branch of Management Planning

For a number of years the Bureau had been very slow in issuing patents to the land after the applicant had fulfilled all the requirements necessary to obtain title. This delay often caused a hardship to the applicant when he was trying to negotiate loans or transfer title to another person. These delays caused substantial criticism, with multitudinous letters from applicants requiring appreciable work on the part of the Bureau in research and reply.

A great part of the delay was caused by the practically complete readjudication of the case by the patent section. This section felt that it should exercise a final review of the entire case to prevent errors and assure full compliance with

An intensive survey was made of the patent problem and after thorough consideration the following changes were put into effect: (1) Responsibility for the correctness of the reservations, conditions, and other pertinent insertions was shifted from the Washington office to the land offices; (2) an entirely new procedure was adopted for the writing of mineral patents; (3) simplified



procedures were adopted in issuing patents on exchange and State selection cases; (4) some new patent forms were adopted.

Prior to the adoption of these changes there was a substantial backlog in the patent work and the Bureau was continually called upon to make certain cases special in order to avoid extreme criticism. The patent issuance work is now practically current and complaints are no longer being received.

Placing responsibility for the correctness of the reservations and conditions on the land office eliminated the previous detailed review which had been made in the Washington office, and which ordinarily required many man-hours. Patents are now issued solely on the basis of the information in the final certificate submitted by the land office. The case record itself is retained in the land office and it is not submitted to Washington as it was in the past.

The new procedure adopted for the writing of the mineral patents eliminated the typing of the complicated metes and bounds land descriptions, which often covered as much as 30 pages. This description is now included in the patent



the laws and regulations. Experience in the section showed that in many cases the final certificates had not been prepared properly. The land offices depended on this final review and trusted that any errors in the final certificates would be discovered by the patent section. Here was a situation of dual responsibility with resulting lack of responsibility being placed where it belonged.

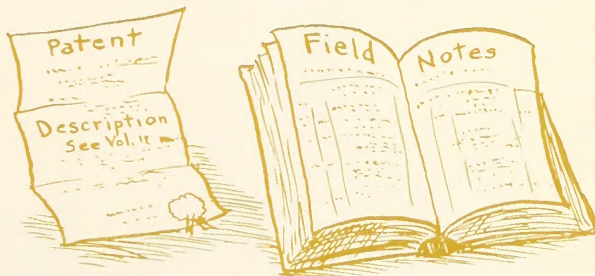
a cross-reference to the field notes and plat of mineral survey. Both documents are attached to and made a part of the patent. The regulations were revised to require the mineral surveyor to submit an extra copy of the field notes for this purpose. This change resulted in a very large saving in time, as it formerly took an average of 15 hours to prepare and issue a mineral patent. It now requires only 30 minutes for the average case.

While final certificates are issued as a guide in the preparation of most patents, this is not done with respect to exchange and State selection cases. Final certificates are not used in these instances, one of the reasons being that they are not handled in the land offices but are adjudicated in Washington. Under the former practice, the information to be included in the patent was obtained by the employees of the patent unit. This required many hours of detailed research through these cases on the part of employees. Under the new procedure the pertinent information is set out in a standard form by the adjudicator at the time he is processing the case. This eliminates a research job on the part of the patent unit and substantially reduces the man-hours needed to issue patents in these cases.

As stated above, these changes have made it possible to keep this work current. It is felt, however, the Bureau of Land Management can further improve this procedure and issue these patents faster. It must be borne in mind that under present practices the final certificates are prepared in the land offices and submitted to Washington where the patents are prepared and then returned. In view of the decentralization of most of the case

work to the field it would seem logical to decentralize the issuance of the patents also. In the majority of cases the patent is issued solely on the basis of the information contained in the final certificate prepared in the land office.

There seems no real good reason, except custom and tradition, to send the final certificate to Washington for preparation of the patents. If the land offices can prepare the final certificates properly, there seems no reason why, with proper training and supervision, they cannot prepare the patent itself. This would make the preparation of the final certificate as well as its long journey



from the land office to Washington, and the long journey of the patent back unnecessary. Issuing the patents in this manner by the land offices would greatly speed up this work. Consideration is now being given to this and we are all hopeful it will not be too long in coming into realization. The present procedure is a great improvement over the former one, but issuance of the patents by the land offices will be the complete solution to this trying problem.





COLLEGE-BRED SHEEP. Director Woozley and others look at a college-bred sheep at the Logan Conference. Left to right: Edgar B. Carroll, personnel officer, Washington; Edward Woozley, Director, Washington; Dr. L. A. Stoddart, head, range management department, School of Forest, Range, and Wildlife Management, Utah State Agricultural College, Logan, Utah; William N. Andersen, Regional Chief, Division of Lands, Region 4, Salt Lake City, Utah; and Lloyd E. Toland, Cadastral Engineer, Region 7, Juneau, Alaska.

ADDRESS TO TRAINEES . . .

LOGAN CONFERENCE

by EDWARD WOOZLEY, *Director*

The following excerpts from Director Woozley's remarks at the Fifth Annual Bureau of Land Management Training Conference held on September 2 at the Utah State Agricultural College Summer Camp near Logan, are published at the special request of the Bureau of Land Management employees.

YOU HELP FORM POLICY

" . . . Every one of you attending this session plays a role in the forming of the Bureau of Land Management policies and programs. Each of

you, because of past experiences which you are applying to your particular job, has the opportunity through training schools like this to learn how to take a more active administrative role. Now it is not enough for you to come to these meetings and absorb what you can. You have an obligation to go back to your offices and to transmit ideas and any new techniques which you have learned to those who have not yet had the good fortune to attend one of these training conferences. I am hoping that sessions like this can be held every year so that the majority of Bureau of Land Management employees will have the opportunity

attend one of these meetings. I consider these training conferences a very valuable administrative tool. . . .

" . . . We are looking forward to developing through these meetings, individuals who can help us build a stronger Bureau of Land Management. We want to retain the best traditions of the agency while we adopt new ideas appropriate for changing conditions and times. . . ."

EMPHASIS ON LAND USE AND DISPOSAL

" . . . Let us take time to examine the land use and disposal phase of our operation and other major activities of the Bureau, listing a few of the problems which are uppermost.

"We expect to classify resources as rapidly as possible so that we may have complete inventories of what we are actually attempting to manage in the way of these public lands. Cost of management must be carefully considered so that the taxpayer will not find that he is carrying the load of the program. We do not, however, plan to raise fees to the point where full development of resources will be endangered.

"Classification of these lands should indicate clearly which acres should be retained in public ownership and which could be better owned and operated by private and State ownership. By State ownership, we mean the fulfilling of grants already made by the Congress to the States and the making of exchanges of land where the State and Federal Government cooperating can improve the land pattern. Concerning recreational aspects of these lands, our desire is to allow States, other Government agencies, or local communities to acquire lands, primarily of recreational value and cooperate in management so that these areas may provide the greatest public benefit.

A LAND-OFFICE BUSINESS

"We are constantly receiving applications from persons interested in securing lands under one of the existing land laws. As you know, we are literally doing a "land office business" on applications, especially those for small tracts.

Thirteen thousand four hundred and sixty-eight applications were filed for small tract leases during the fiscal year 1953. This is 5,320 more than were filed last year.

With this increasing interest in acquiring lands, we must be very careful to give as accurate and complete information as possible. Using small tracts as an example again, let us be sure that we paint a realistic picture. . . .

" . . . Now in addition to applications for small tracts we get many for desert land entries. The number has jumped from 1,671 to 3,280. Here again this agency must be ever on the alert respecting the interest of the man who is applying for a desert land entry and at the same time taking into full consideration increasing ground-water problems in the Western States. . . .

"We could continue this discussion of land settlement possibilities . . . but I am hoping when we turn this into an open forum a little later this morning to hear your views of these and other subjects. So let us leave land disposal for the time being and take up another topic." [Editor's Note: A discussion of cadastral survey, forestry, range management and minerals followed in the speech.]

REAL ESTATE OPERATIONS AND BLM RECORDS

" . . . When we analyze our activities, we recognize that the Bureau of Land Management is a real-estate operation being carried forth on behalf of the people of the United States. As good business managers, we must expect to earn the maximum amount of revenues consistent with sound conservation practices. We must recognize that proper disposal of certain of these properties is in the public interest. We believe that the full worth of the valuable resources on public lands may be realized with a minimum expense to the taxpayer and that through careful cooperation with private enterprise, these lands can produce the products on which local, State, and national economy depend.

"Basic to these real-estate operations are the priceless records in the Bureau of Land Management files—records inherited from one of its predecessor agencies, the General Land Office. We promise to protect and preserve these documents—the valuable link in the chain of evidence for real-estate transfers, private and public.

"These records, containing the patents to lands from the early days of our country through present times, are essential to our own operations in resource development and use of public lands and they are also in constant demand by the people of the whole United States.

HOW TO GET THE JOB DONE

" . . . I have hit only the high points of our big job. How are we going to get it done? Granted we have the best staff possible, we are still going to need help from others. We will need to seek the advice and counsel of people in industry, people with transportation experience, etc., people who through regional and nationwide advisory groups can help us to do a better job. We already have this kind of help to some extent in range management and forestry. I believe the idea of advisory boards, if not the exact pattern, can be carried forward to other groups. . . .

" . . . I hope you are going to go back to your job determined to help this Bureau to fulfill its obligation to all the people of the United States, to give the best possible service in public land resources and development at the least possible cost to the American taxpayer. If we keep this as a basic goal, we will be able to maintain balance in our individual jobs, balance in the Bureau's relationship with others, and in time we will be contributing even more than we now are toward balancing the budget for the whole Nation.



PLANE. The sheikhs and their companions enjoy the hospitality of "Gene" and "Mitch" Etchart who took them for an airplane ride to see how a waterspreading system looks from the sky.

FROM THE EAST, THEY CAME TO SEE OUR WESTERN PROJECTS

Based on Data and Pictures Prepared by WILLIAM C. MEBUS, *Program Analyst, Branch of Research and Statistics*

Twenty-three men from nine countries of the Middle East have spent most of this fall studying the various ways in which soil, water, and grass are being managed and conserved in the semiarid regions of our Western States.

Vast areas of the Middle East, from northern Africa across to the Indian subcontinent, are dry and barren. Conditions of climate, topography, soil, and vegetation are surprisingly similar to those found in many parts of our West.

American technicians who have toured and worked in the Middle East have long believed that measures employed in the semiarid regions of the United States to conserve moisture, develop ground water, restore grass, and control grazing could work wonders in the near-desert regions of the Old World. The leading technicians of many Middle Eastern countries have also come to believe that these measures and practices might restore ranges that have been overgrazed for centuries—ranges that are wastelands today but supported large flocks and thousands of villages in ancient times.

Some of these techniques have already been demonstrated by American technicians as in the

deserts east of the Jordan River, where Bedouin tribesmen have been amazed to see grass growing hip-high for the first time in centuries.

Sponsored by the technical cooperation program of the Foreign Operations Administration, a number of technicians and leaders from the Middle East have spent 3 months on a long tour of western rangelands, to see all kinds of water spreading, range management, and conservation work in actual operation on a large scale. The tour was conducted by the Bureau of Land Management, assisted by the Soil Conservation Service, the Forest Service, and the Bureau of Indian Affairs.

Led by Floyd Larson of Billings, regional chief of the Branch of Soil and Moisture Conservation, men from Jordan, Lebanon, Iraq, Iran, Egypt, Libya, Pakistan, Saudi Arabia, and Turkey made the tour. Some of the visitors are expert agriculturists and engineers, others are influential leaders among their people.

All of them expressed interest in even the smallest details of structures, techniques, machines, and practices. Machinery, especially heavy earth-moving equipment, came in for special attention but the visitors were always alert for the kinds of

things that can be done with hand labor, which is plentiful in their countries, while heavy machines are scarce and expensive.

The travelers, some of whom wore their traditional robes and kafiyahs (headdress) and several of whom spoke little or no English, were impressed with the warm hospitality of the people of the West, whom they met on their farms and ranches, in their homes, and in the towns where they stopped.

Men who have fought the same battle for survival on a few inches of rain have problems and interests in common that overcome barriers of language, custom, and tradition. The visiting leaders spent tireless hours discussing rangeland management along a route of several thousand miles, from Montana to Texas. Besides gathering a great deal of technical knowledge which they will help put to work in their own countries, they will take back recollections of pleasant hours spent among friendly people, which should do much to promote understanding between our country and theirs.

American agricultural land technicians are already helping demonstrate various measures for making more effective use of water and managing semiarid lands for sustained livestock production in many of the countries from which the visitors come. When the leaders return to their homes, it is expected that they will give greater impetus to governmental and community-action programs to improve grazing lands—which is almost essential for the economic stability of the Middle East. By seeing for themselves what can be done and what has been done under similar conditions in our Western States, these leaders will be fired with enthusiasm and will understand the practical methods of dealing with overgrazing and range management under semiarid conditions.

The photographs show a few of the thousands of things the visitors saw and did in their long tour—the building of large water-spreading dikes; the effects of overgrazing and how it is controlled.

Only time will tell—but it is possible that this autumnal tour may start an era of desert land development of greater significance in the Middle East than any headline news story of the day.

CONTRAST. The leaders walk from a contour furrowed flat in Montana that is growing lush crested wheatgrass . . . across



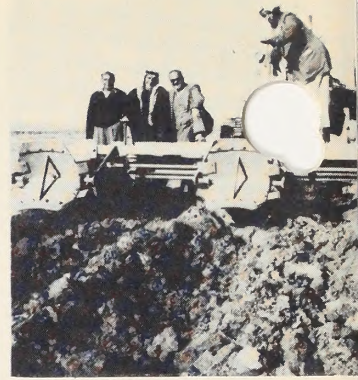
RANCHER. A rancher at Glasgow, Mont., discusses range management with his guests from the Near East.



SILT. Lee Wilson of Broadus, Mont., shows how silt accumulating in a range waterspreading system has almost buried an old blaze on a cottonwood tree. The blaze was made in 1904.

the road to an untreated area supporting only a light stand of cactus and brush.





MACHINERY. Sheikh Hadid was shown a model contour furrowing machine developed cooperatively by the Forest Service and the Bureau of Land Management.

DESERT. Sheikh Hamad Ben Abdulla and Sheikh Mohammed Ben Hadid are shown the western range much like the desert lands of their native Jordan.

INTERCHANGE OF KNOWLEDGE BETWEEN EAST AND WEST HELPS TO PERPETUATE THE GOOD EARTH AND TO PROMOTE WORLD PEACE

SAGEBRUSH. Results of sagebrush removal and reseeding are demonstrated by Area Manager Dick Greenland (extreme right) of Cedar City, Utah.





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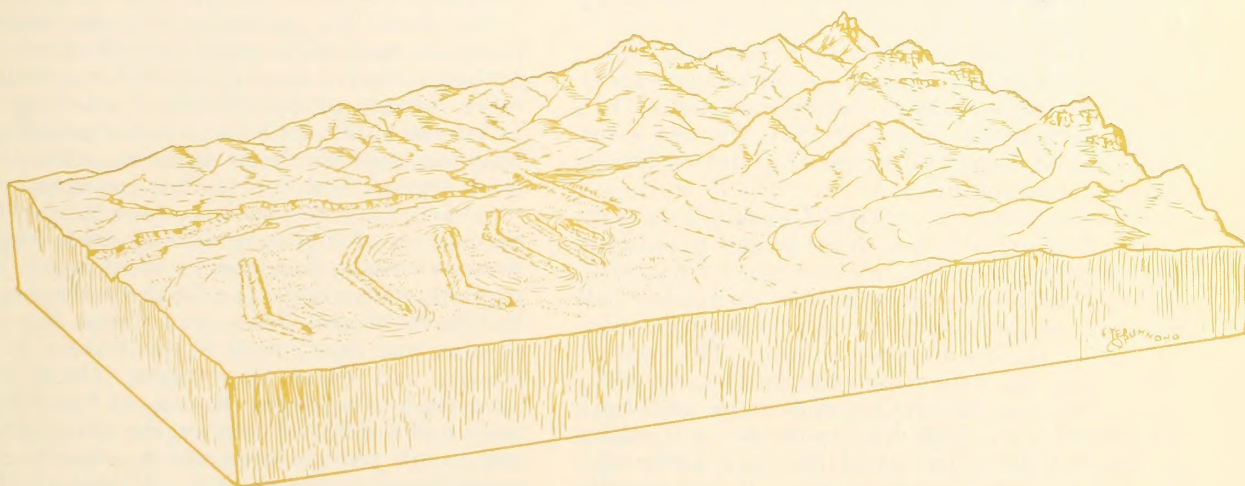


DETENTION DAM. The Egyptian delegation takes notes on a detention dam outlet structure in Wyoming.



BARBECUE. They "supervise" the preparation of a barbecued lamb donated by a rancher for a Leader-Rancher feed.

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STREAM GAUGING. Waheed Akhtar of Pakistan receives a lesson in stream gauging while his friends observe the method used.



A JOB FOR PAUL BUNYAN

by JOHN CLARK HUNT, *Forest Protection Officer, Region I*



One of the worst catastrophes ever to strike the forests of the Western United States is now taking its enormous toll.

It started with the 1949-50 windstorms which blew down a large volume of timber in many areas. This was followed by major forest fires in 1951, the hurricanes of December 1951, the dry years of 1951 and 1952, and more windthrown timber during the winter of 1952.

The results of this ill-fated combination provided the material in which the largest population of tree-killing bark beetles ever known has bred. A horde of insects, unbelievable in number and appetite, is now eating its way through millions of acres of the Nation's best timber. The destruction rivals the Tillamook burn in Oregon (360,000 acres) and the terrible and tragic 1910 burn which swept through large portions of northern Idaho and Montana. And the bark beetle epidemic has not yet run its course. It undoubtedly will continue for a few years, to an uncertain extent, depending upon weather conditions and the natural enemies of the bark beetle.

The epidemic is located in Oregon, Washington, northern California, Idaho, and western Montana. The most critical damage has been and continues to be that caused by the Douglas-fir beetles in western Oregon. But other States are suffering severely from this same insect.

In addition to this epidemic, there is an increasingly serious infestation of spruce-bark beetles in extensive areas of Idaho and Montana. The battleground is, however, much wider than the States named; for scores of local epidemics and limited infestations by several species of tree-killing insects are making inroads on ponderosa, white pine, sugar and lodgepole pine in the western forest regions.

One very successful fight, which has been waged for 4 years, is the cooperative aerial campaign against the spruce budworm in Oregon and Washington. But the budworm has only been controlled and his destruction reduced to a minimum. He has not been eliminated. The fight must be continued by the Federal, State, and private forest agencies who have been responsible for the cam-

paign, if millions of acres of timberland in all categories of ownership are to be safeguarded.

To control the epidemics of timber-destroying insects, to keep them under control, to salvage the billions of board feet of windthrown timber and other billions of board feet of standing insect-killed and infested timber, are the towering problems facing public forest agencies, private timberland owners, and the lumber industry.

So far, these actions have been taken: During the summer of 1952 an aerial and ground survey of western Oregon and western Washington was organized and completed under the leadership of the Pacific Northwest Forest and Range Experiment Station and the United States Bureau of Entomology and Plant Quarantine. Other Federal agencies, including the Bureau of Land Management and the Forest Service, the State of Oregon and some private timberland owners actively participated in the survey. A total of 13.5 million acres was surveyed from the air. Detailed maps were made of 10.5 million acres showing the location of blowdown and beetle-killed timber. These maps were available to forest land owners so that salvage could be planned, if such operations were not already under way.

The survey showed that approximately 10 billion board feet were on the ground or dead from bark beetle attacks which had spread from the breeding grounds of blowdown and fire-killed timber. As a result of the survey, the harvesting of green timber switched rapidly, wherever possible, to salvage of windthrown and beetle-killed trees. Roads were built and construction started on other roads, to reach as many inaccessible areas as possible. The entomologists cautioned timberland owners and the forest agencies that the epidemics would spread. They instructed loggers how to recognize infested trees which are still green and how to report the infestations.

An aerial resurvey of the same area was made in 1953. The spruce budworm spraying project was continued again for the fourth year with excellent results.

(Continued on page 18)

TWO HUNDRED MILES OF FENCE

by LELAND E. FALLON, *District Manager, Region III*

The range users in the Badlands unit in Malta grazing district are dead serious about improving their Federal range lands in cooperation with the Bureau of Land Management. For example, this year before winter sets in they will have driven more than 18,000 steel posts in building nearly 70 miles of range boundary fence. This is only a good start on their 200-mile fence program.

The Badlands unit in northern Montana covers 800,000 acres, most of which is solid Federal range. Prior to the passage of the Taylor Grazing Act the area was primarily used as winter range for thousands of sheep. Waterholes were many miles apart. With the development of stockwater dams the main use shifted from sheep to cattle and from winter use to summer. There were very few fences. It remained an open-range area used in common by many operators.

In 1951 the range was adjudicated by agreement among the range users into individual allotments and manageable range units. To obtain maximum use of the forage resource, stock water had to be developed and fences constructed to control livestock movement. The majority of the stockmen recognized this need and were anxious

to develop the Federal range upon which the success of their livestock operations depends. They wanted their calves sired by the bulls they carefully selected and paid dearly for, rather than by neighbor's bulls not of their liking.

The financing of a \$100,000 fencing program was many times beyond the realm of available district Federal funds. A few of the permittees could afford to construct fences around their entire allotments. However, there is more to it than the mere construction of the fence. There are the many years of maintenance that must be considered. The stockman wanted his neighbor to construct and maintain half of the fence between them. Rightly, he wanted it to be a mutual project rather than to have his neighbor feel he was being "fenced out."

To start the program in 1951 the Bureau of Land Management began furnishing wire and the range users, the posts and labor. By the end of 1952 only 20 miles of the needed 200 miles had been constructed . . . a mere token of the main job. A 20-year project! Too many cases were encountered where the neighbor just could not afford or

(Continued on page 18)

POSTS. Etchart Ranch company driving crew setting posts on their east boundary. Badlands Unit, Montana, M-1 District, Region III.





active acres

ACTIVITY MAP

Montana is the third largest State in the Union, containing over 93 million acres of land. Of this amount, only 7½ million acres remain as public domain. Nevertheless, this 7 percent constitutes a significant segment of the total economy of the State. These remaining public lands are primarily valuable for grazing, although they support other uses including watershed, wildlife, recreation, minerals, and combinations of these uses. Last year, over 4,800 stockmen grazed over 1,600,000 head of livestock on these public lands. There were over 62,000 big-game animals, principally antelope and mule deer, which obtained part or all of their year-long feed from these public lands. Over 1,211,000 acres of these lands have been withdrawn as wildlife refuges and game ranges because of the importance of these resources. Timber production on the public lands is limited to the western portion of the State where, in 1952, nearly 2 million board feet were harvested and sold.

The mineral production from the public domain lands returns the greatest revenue. In 1952, from leases on the public domain lands, production amounted to 1,800,000 barrels of crude oil, 4½ billion cubic feet of natural gas, 327,000 gallons of natural gasoline, 642,000 tons of coal, and 237,000 tons of phosphate rock. Petroleum production is increasing rapidly in the newly developed Williston Basin which included the eastern one-third of the State. Exploitation of the phosphate resources is also accelerating.

RESHAPING PUBLIC LAND POLICY

(Continued from page 3)

owning the surrounding areas. On the other hand forested areas of a size susceptible of good management will generally not be classified for disposition. There are many other examples, but

these give a broad picture of the policy we have in mind.

It is our belief that disposition of parcels falling in the categories mentioned will place us in a position to devote our efforts more effectively, within the limits of the funds available for management, to those areas which will do the greatest good to the public as a whole by being held in Federal ownership. We will of course make exchanges which will result in acquisitions of property for the purpose of creating areas more suitable to satisfactory management, thereby again disposing of less economic parcels.

Before we leave the subject of land use and disposal, let us consider another aspect of the situation and that is how we can help the applicant in getting what he needs. I believe we should attempt to lessen the great burden involved in the processing of applications and appeals by giving more aid to applicants. In this way, the applicant may not be unduly delayed and the Department will not be burdened by applications that fall in the wrong category with respect to the availability of the land for which an application is made. We can give our first help at the time of field examinations. Then the examiner often notes that the applicant might well be entitled to the land under a certain act of Congress but he has applied under another. The examiner might well call this to the applicant's attention thereby avoiding the confusion, delay, and need for further applications. We should always bear in mind, however, that we are merely making a suggestion to the applicant and that if he desires to proceed in the same manner as he has commenced, despite our suggestions, he is certainly privileged to do so.

But before we ever reach the problem of land classification, we have the basic need for surveys. We all recognize that one of the difficulties in keeping our work up to date lies both in surveying and in classifying. Much study has been made of new and more advanced methods of cadastral surveying.

The cadastral survey of the public domain constitutes a basic fact of real significance for any source or settlement development. The program in general is designed along lines to aid in the wider development of our natural resources and to provide lands, particularly in Alaska, for homes and business sites.

In order to provide control for oil and gas development over the unsurveyed areas in the continental United States, amounting to over 100 million acres, the township exteriors only in some areas are being surveyed. By this procedure more than five times the area can be covered than if each township was completely subdivided. In Alaska, where in recent years thousands of oil and gas applications have been filed, the survey plan is being worked out over large areas in order that the lands being leased may be described in terms of the public land survey and thus eliminate the confusion and uncertainty that arises when the areas are only described by metes and bounds. Surveying for settlement purposes is one of our major activities in Alaska.

A new problem confronts us in surveying and describing the tracts to be leased for oil and gas on the Outer Continental Shelf. At the present time some of these leased tracts are located more than 25 miles from the actual coastline and drilling operations are being conducted in water more than 50 feet deep. In all cases the tracts are being located and described with reference to geographical and plane coordinates and tied into permanent triangulation stations on the coast. This is a departure from the rectangular system of surveys which has been extended over the public domain.

Such surveys are prerequisite to any form of land use whether it is the forest, minerals, or vast grazing lands in the West. One of our most important land programs is that of range management. Our present work we feel is proceeding satisfactorily but here is one field in which much can be done by placing more emphasis on the range user's cooperation in the improvement of the range. Such expenses as may be paid for by the user who is an active partner in our land program, will increase the area we can satisfactorily cover in range improvements. Furthermore, it will create a greater interest on the part of the user. Here's a real example of how we can place more emphasis on private than on Government management. Range improvement with the help of the man in the field, has proved on the whole more satisfactory. We are presently working on plans that will provide the necessary incentives to accomplish this purpose.

One of our most important fields of activity in range management is a soil and moisture program. If properly conducted, we can increase the amount of land available for use; prevent the loss of presently useful land; create further supplies of water, both by increasing the underground supplies and by decreasing the silting of reservoirs.

Results of the program to date indicate that the forage resource can be increased by one-third and maintained permanently at a high level of productivity with full conservation treatment. Range users fully understand and appreciate the value of this work and are contributing an increasing amount of the cost in private funds, labor, and materials. The enlarged program made possible by this cooperation is in part responsible for a trend toward planning conservation work by community watersheds, thus encouraging group cooperation instead of depending upon individual operators. Where local soil conservation districts have been organized, the planning for the public lands is coordinated with the district conservation program in order to provide intelligently for all lands in the watershed regardless of ownership.

I listed as 5 and 6 new phases in forest and minerals policy. Here, indeed, I can touch only the high points of this discussion. It would appear that the two places where our work in the forestry field might be improved is in a greater emphasis on access roads. Much study, as you know, is being made of this problem at the present time looking toward a more flexible policy generally and in particular with respect to allowable timber cuts. The study being made on access roads is not expected to be delaying in nature and we anticipate that it will shortly result in an improved policy which will be implemented without delay. With respect to the allowable cuts, a flexible policy here will make it possible to increase or decrease the allowable timber cuts so as to eliminate the infestation of timber more promptly and to create a more balanced program as the economic conditions of the particular time may require.

In the minerals field much work is now being done in the field of offshore lands and it is expected that regulations will be available for comment within a very short period of time. In the leasing field there has been an increased demand for potash and phosphate with the result that a reexamination of the leasing policies appears necessary. The methods of mining these minerals and the scale of such mining has changed so materially that we are presently engaged in studies that may result in new regulations. These regulations are designed to assist in making possible long-term sustained developments of such areas with the resulting stability of the communities dependent in whole or in part on production of these minerals.

We have explored only a few of the policies that need reviewing and perhaps reshaping in the five basic activities of the Bureau of Land Management, lands, surveys, range, forestry, and minerals. As I pointed out in the beginning, this is your job as well as the Department of the Interior's. We look to you, full partners in our public lands, for your counsel, and participation in reshaping our land management program.

JOB FOR PAUL BUNYAN

(Continued from page 14)

But the job has just begun. The constant fight against insects and the salvage of dead and dying timber must of necessity continue.

Close working cooperation of Federal, State, and private forest agencies and timberland owners is absolutely essential.

Timber access roads are important in this fight, for the entomologists say there is no other feasible method by which man can aid in the natural control of the bark beetles except to remove the infested trees, prevent fires, and use every care in forest management to reduce the beetle population.

Region I of the Bureau of Land Management, particularly in western Oregon and northern Idaho, is concentrating timber sales in the blowdown and beetle epidemic areas. From January 1952 to September 1953 the Branch of Timber Sales reports that 536 salvage sales have been made. A total volume of 359 million board feet of salvage sold for \$7,358,435.34 during the period.

But again this is only a beginning of the salvage program, for the region estimates it has approximately 3 billion board feet of blowdown and insect-killed timber on the O & C lands. The Bureau of Land Management has (in its accelerated salvage program) assigned all available forestry personnel to processing sales of salvage timber. The only exceptions are the limited areas where the salvage problem does not exist, and a minimum number of green timber sales are necessary to support woodworking communities.

The Bureau of Land Management is also fighting the insect horde by relaxing right-of-way and marketing area regulations, by cooperating with all forest agencies and private owners, and by building timber access roads as rapidly as possible to reach the blighted areas.

The goal is to remove approximately 2 billion board feet of this decaying resource from the woods by 1957. Even if this can be accomplished, 1 billion or more board feet would still await the saw and could only be picked up in the normal course of timber sales because it is scattered over millions of acres; and when it is finally salvaged, the volume and dollar loss is bound to be heavy.

TWO HUNDRED

(Continued from page 15)

was not willing to burden himself with the cost of buying the posts. As a result the range users early in 1953 petitioned the Malta District Advisory Board to recommend that the range improvement fee for the Badlands area be increased

from 2 to 15 cents per AUM for a period of years to purchase fence materials. Pursuant to the Board's recommendation the range improvement fee for the area was authorized by the Director and set at 15 cents per AUM.

Under the program worked out with the permittees, the Bureau of Land Management furnishes steel posts at a flat rate of 270 per mile together with 13 spools of wire. The range user in turn contributes 30 cents to the Bureau of Land Management for each steel post he receives. This contribution is used to purchase more fencing material. The permittee does the fencing and furnishes his own brace and corner posts. The standard fence consists of 3 barbed wires with posts set 20 feet apart. This type of fence is adequate, meets the State law and is in accordance with the customs of the area. The total cost of the fence is \$430.78 per mile of which \$65.21 is contributed by the Bureau and \$365.57 by the range user, consisting of \$215.57 in range-improvement fees and contributions plus \$150 for labor and materials. Fencing of this type is usually valued by local range users at not less than \$550 per mile.

Why does the range user construct his boundary fence in this manner rather than directly under a section 4 permit? The main reasons are:

1. By buying in quantity post costs are reduced from 95 to 70 cents and wire from \$10.50 to \$7.06 per roll. The cost of wire and line posts for 1 mile of fence is reduced from \$393 to \$280.78, saving of \$112.22.

2. His neighbor is more inclined to build his share for the reason he only pays out \$81 a mile for line posts and wire instead of \$393, other than the range improvement fee.

The fact that the program increased from 10 miles per year to 70 miles with less Bureau of Land Management participation in funds attests to its workability.

One county road through the area is traversed by 5 new fences in 25 miles necessitating car passes at each crossing. The local county commissioners recognizing the need for the development are furnishing the car passes. The range user installs them with the assistance and supervision of the county road crews.

Water development must be closely coordinated with the fence program. The range users also cooperate to the extent of 25 percent or more of the cost of stockwater dams developed by the Bureau of Land Management on their ranges. This summer alone they participated in the construction of 22 stockwater reservoirs.

The 65 Badlands users grazing approximately 10,000 cattle and 8,225 sheep will have invested more than \$27,500 in 1 year in developing 600,000 acres of Federal range. Many are planning division fences to divide their allotments into calving and breeding pastures. The 200 miles of boundary fence is only the beginning!



WEED ROUNDUP

by ROYALE K. PIERSON, Chief, Branch of Soil and Moisture Conservation

With so much attention focused on halogeton during the past few years, we have been prone to overlook the serious problem of other weeds infesting large areas of public land. It is true that some of these weeds are much more toxic than halogeton and cause greater livestock losses each year. Most of them are native to the range country and are generally confined to locations of about the same sized area year after year.

To date, none has shown any indication of spread approaching the explosive rate of halogeton which, in a few years, has infested a larger area of public land than any of the other harmful weeds. It is this rapid spread and the immense area susceptible to invasion that has caused halogeton to become a major range problem.

The many species of weeds that are found on the public lands can be grouped into several broad categories such as poisonous, noxious and harmless. A fourth group of undesirable shrubs is generally included with weeds because problems of control are similar. The group of poisonous weeds is probably the most important from the range management standpoint because of livestock losses and the necessity to follow certain precautionary measures to avoid livestock losses. Halogeton now occupies the largest area of range among the poisonous group, the latest estimate being nearly four million acres of Bureau of Land Management land. Other important poisonous weeds are larkspur, death camas, timber vetch, pinque, whorled milkweed, loco, and copperweed. The total area of Bureau of Land Management land infested by this group is estimated to be in excess of 200,000 acres.

The group of noxious weeds is important principally as a source of seed for the continued reinfestation of nearby farmland where control measures may be carried on constantly. This situation has resulted in numerous efforts by farm groups and others to induce the Congress and the Bureau of Land Management to provide for an effective eradication program. To date these efforts have met with little success. The most troublesome noxious weeds are Canada-thistle,

whitetop, morning-glory, tansy ragweed, and goat-weed which infest an estimated total of 35,000 acres of Bureau of Land Management land. In addition, Russian-thistle might be considered with this group where nearby crops susceptible to curly top virus are grown. Russian-thistle is an alternate host plant for both the virus and the beet leafhopper which transmits the disease. An estimated 30,000 acres of Russian-thistle are in threatening locations. Medusa rye while occupying only a thousand acres at the present time, could become a noxious range weed.

Many of the harmless range weeds which include both annuals and perennials, provide palatable forage for livestock. Others such as snakeweed, tarweed, sneezeweed, and wyethia are unpalatable and reduce the grazing value of the range. A few annuals such as Russian-thistle, bassia, and annual Kochia invade overgrazed and disturbed range areas furnishing some forage but which is usually inferior to the native perennial forage plants. Good range management practices are the best control measures against invading annuals.

In the group of undesirable shrubs are sagebrush, rabbitbrush, junipers, blackbrush, horsebrush, mesquite, and oak brush, which cover many millions of acres of Bureau of Land Management land but furnish very little usable forage. In many instances these species have invaded over-used ranges in the past and are occupying space now which could be better utilized by more palatable forage plants.

A great deal of attention is being devoted to the control of many kinds of range weeds by State and Federal experiment stations. The Forest Service Range Reseeding Committee, in which the Bureau of Land Management participates, has been maintaining a current summary of all the latest developments in control methods for range weeds. The committee is also active in the development of weed-control equipment especially adapted for range use. At the present rate of progress, effective and economical methods will soon be available for controlling many range weeds and reducing livestock and forage losses.

REALISTIC LOOK

(Continued from page 5)

"My great granddad only had to fight the bears and Indians to get his land. He, so far as I am concerned, had it easy. It is just impossible for one to understand where to start to look for a plot of ground."

The Bureau's land offices hold their land status records open to the public during office hours, furnish certain materials without charge, and furnish others such as copies of survey plats or township diagrams upon payment of a charge. They otherwise help so far as they can, but there is a limit to the service they can perform for individuals.

In June 1953, the Bureau had 31,223 leases in effect under the Small Tract Act, embracing 141,434 acres. Annual rentals of \$161,914 had been paid in to the Federal Treasury. Final entries for the sale of small tracts under existing leases were approved for 596 applicants in 1953. However, less than 6 percent of the leases in effect have reached the stage of sales. Many lessees have been impeded in developing their tracts by rising construction costs, poor roads, lack of utilities, and other reasons. Costs of private land surveys are sometimes a deterrent. The Bureau of Land Management marks subdivisional corners in the general area, but does not stake out the individual tracts. State or local building or sanitary codes may be imposed or made more stringent, requiring unforeseen expense. Veterans and others should consider these problems before investing time and money in a tract.

The California-Nevada areas such as Twenty-nine Palms and Las Vegas, though exhibiting the heaviest leasing volume, have among the lowest rates of progression into sales. By contrast, in the Anchorage, Alaska, Land Office, patents have either been issued or authorized for 599 out of 967 leases.

The low progression into sales in California-Nevada may indicate that many applicants had acted from speculative motives rather than a real desire for personal use and benefit. Such speculation has very rarely proved to be profitable.

The small-tract outlook for 1954 is for more and better managed openings by the Bureau and continued heavy demand. Notices of all openings will be published in the Federal Register, posted in the land office of the State or district concerned and furnished to the local press for such publicity as it deems appropriate. Most openings will likely be oversubscribed by veterans of World War II, necessitating drawings. The law granting preference to veterans expires on September 27, 1954.

A round-up by States follows as of October 1953:

Arizona.—Nine thousand two hundred and four-

teen acres classified; practically all under lease. Additional openings scheduled near Tucson late in 1953 and throughout 1954.

California.—One hundred and fifty-six thousand one hundred and fifty-eight acres classified for lease or lease and sale of which 107,269 acres were under lease as of June 30, 1953. Primary areas are in San Bernardino, Riverside, and Kern Counties. Additional tracts will be opened in 1954 in Riverside, San Bernardino, Kern, Los Angeles, Shasta, Trinity, Siskiyou, and Calaveras Counties.

Colorado.—No classified tracts available. Two new classifications involving 120 acres to be opened upon acceptance of survey plats. At least 2 other areas to be opened in 1954.

Idaho.—Two hundred and sixty-five acres classified for lease and sale; 43 acres classified for lease only; mostly under lease. Additional classifications expected in late 1954.

Montana.—Existing classified areas already fully leased. Additional areas will be opened in 1954.

Nevada.—Fifty-four thousand two hundred and sixty-two acres classified for lease or lease and sale of which 12,222 acres were under lease in June 1953. Primary areas are near Las Vegas, Reno, and Carson City. Additional tracts will be opened in 1954 in Clark, Washoe, and Ormsby Counties.

The greater part of the lands in Nevada that have been classified but not yet leased is covered with unpatented mining claims or conflicting applications under the public land laws. These conflicts are being cleared as rapidly as possible. A certain number of the tracts that have been classified will have to be eliminated from the present small-tract classification if the adverse mining claims are determined to be valid or if the other conflicts cannot be cleared.

New Mexico.—Three thousand three hundred and eighty-two acres classified, about two-thirds leased.

Oregon.—One hundred and sixty acres classified for lease and sale. A few forested sites available on Oregon and California revested railroad grant lands in western Oregon under special land-use permits. Several openings expected in 1954.

South Dakota.—A few scattered tracts near Black Hills and Harney National Forests have potential small-tract possibility but are not currently available pending adjustment of national forest boundaries.

Utah.—Very limited possibilities; demand has not developed.

Washington.—A few suburban tracts available near Ephrata, Kennewick, and Richland. Additional openings expected in 1954.

Wyoming.—A few classified tracts available for lease only in Casper Mountain, Greybull, Rawlins, and Lake Hattie areas. Additional openings expected in 1954.



ALASKA. Sitka and white spruce along the Sterling Highway near Ninilchik, Kenai Peninsula.

FEDERAL FOREST AND RANGELANDS

by WALTER H. HORNING, *Chief, Division of Forestry*

The following statement was presented by Mr. Horning in panel discussion at the Forest Land-ownership Session of the Fourth American Forest Congress held in Washington, D. C., on October 31.

In this brief space it is not possible to give the full text of his talk which covered the following range of topics: The Public Domain, Management vs. Disposal, Land Pattern Problems, Public Domain in the Territory of Alaska, Public Lands for the Proposed New State, and Review and Revision of Public Land Policy.

Copies of the complete speech may be obtained on request by writing to the Director, Bureau of Land Management, Washington 25, D. C.

The Bureau of Land Management administers 470 million acres of public land. Of that total, 180 million acres are in the States and 290 million acres are in Alaska. Most of the area in the States and all of the Alaska area is unreserved public domain. The public domain in the States is used chiefly for grazing. Some of it is in commercial forest and is used for timber production. Included also are the 2½ million acres of Revested

O & C railroad grant lands in Oregon for which the Congress by specific law has established the policy of sustained-yield forest management.

All of the public-domain lands whether in the States or Alaska are subject to disposal under the public land laws excepting where active Federal resource management programs are in effect and disposal would threaten to defeat such programs.

Some of the States have extensive selection rights which may be exercised on the public domain. These selection rights arose in large part from the creating of certain national monuments and military reservations. Such rights should be exercised and cleared up because of the difficulty of reconciling long-term management plans, with wholesale disposals of the same lands.

When the timber is sold on the public-domain lands it is marked for selective cutting of the mature trees while reserving the young for further growth. These measures, and fire protection, are carried out in order to put these lands in condition to grow future crops of timber. Their highest and most probable future use is for timber

(Continued on next page)

growing and whoever eventually possesses them will get productive property.

One of the more serious problems in management of forest and rangelands arises from the fragmentation pattern which characterizes large portions of the Federal, State, and private holdings. Certain corrective measures are indicated. Federal, State, and private holdings and intermingled holdings of differing Federal jurisdictions could be separated from one another by exchanges and assembled in separate consolidated blocks for better management. Many isolated tracts of Federal forest and rangeland are completely surrounded in some cases by established tree farms and in others by well-managed livestock ranches. Such tracts when in demand at fair market price can be sold.

Recent estimates for the public lands of Alaska indicate that as much as 40 million acres are covered with commercial-size spruce and other species and that 85 million acres are in various stages of reforestation after having had the original forest destroyed by fire. These forests have great potential value for the pulp and paper industry which is building in that direction.

Alaska appears destined to become a State in the near future and as such may be granted large areas of public domain. Much of Alaska, however, appears unsuitable for and unattractive to private ownership and this is true of much of the land which may be granted to the State.

The terrain and the remoteness and character of the forest resources of Alaska are such that economic forest management probably will have to be for units of large area. This will be true whether carried out under public or private initiative. It should be noted here that forest management for such areas by private enterprise does not necessarily require private ownership of the land. In Canada, which has enormous areas of forest exactly like that in Alaska, management and development are provided through long-term leasing of large units while retaining the land in public ownership.

There is urgent need of land classification authority for Alaska so that the areas suitable for disposal to private ownership and for various Federal and State purposes may be properly identified. In addition there is serious need of a clear-cut land policy determination so that the economic development of the Territory or State may be facilitated.

In the Bureau of Land Management we heartily endorse the proposal of the American Forestry Association to have a competent study made to determine what lands should be designated for Federal, State, and private ownership. A more positive land policy is needed so that foresters who are custodians of public forests may know where they are going and be enabled to plan accordingly.

If the proposed study is undertaken I assure you that you can count on full cooperation from the Bureau of Land Management.

WANT TO LEASE

(Continued from page 4)

geologic structure of a producing field, leases must be awarded on competitive bids in units not exceeding 640 acres to the highest responsible qualified bidder at a royalty of not less than 12½ percent. Leases for not to exceed 2,560 acres within a 6-mile square may be issued for all other land subject to the act to the first qualified offerer at a royalty of 12½ percent. All leases, except renewals of certain 20-year leases, are for a primary term of 5 years and so long thereafter as oil or gas is produced in paying quantities.

No leases may be issued for land within one-half mile of the exterior boundaries of a naval petroleum or helium reserve unless the land is being drained of its deposits by wells on privately owned land or it is determined by the Secretary of the Interior that operations under a lease will not adversely affect the reserve through drainage from known productive horizons.

The maximum that may be held under lease in any one State by a single interest is 15,360 acres, but there is no limitation upon the number of States in which such maximum interests may be held simultaneously.

The leasing of the public lands is handled by the Bureau of Land Management with advice from the Geological Survey as to the status of lands covered in individual applications.

Since leases in known structures are awarded on the basis of bonus bids invited by the bureau, operators seeking such leases need only comply with the requirements for eligibility.

Leases on nonproven lands are noncompetitive and are granted to the first applicant to file an offer to lease, which if approved will be the actual lease, on form No. 4-1158. For land located in areas covered by bureau field offices, applications should be filed with the appropriate regional office. Applications for other lands must be filed with the bureau in Washington.

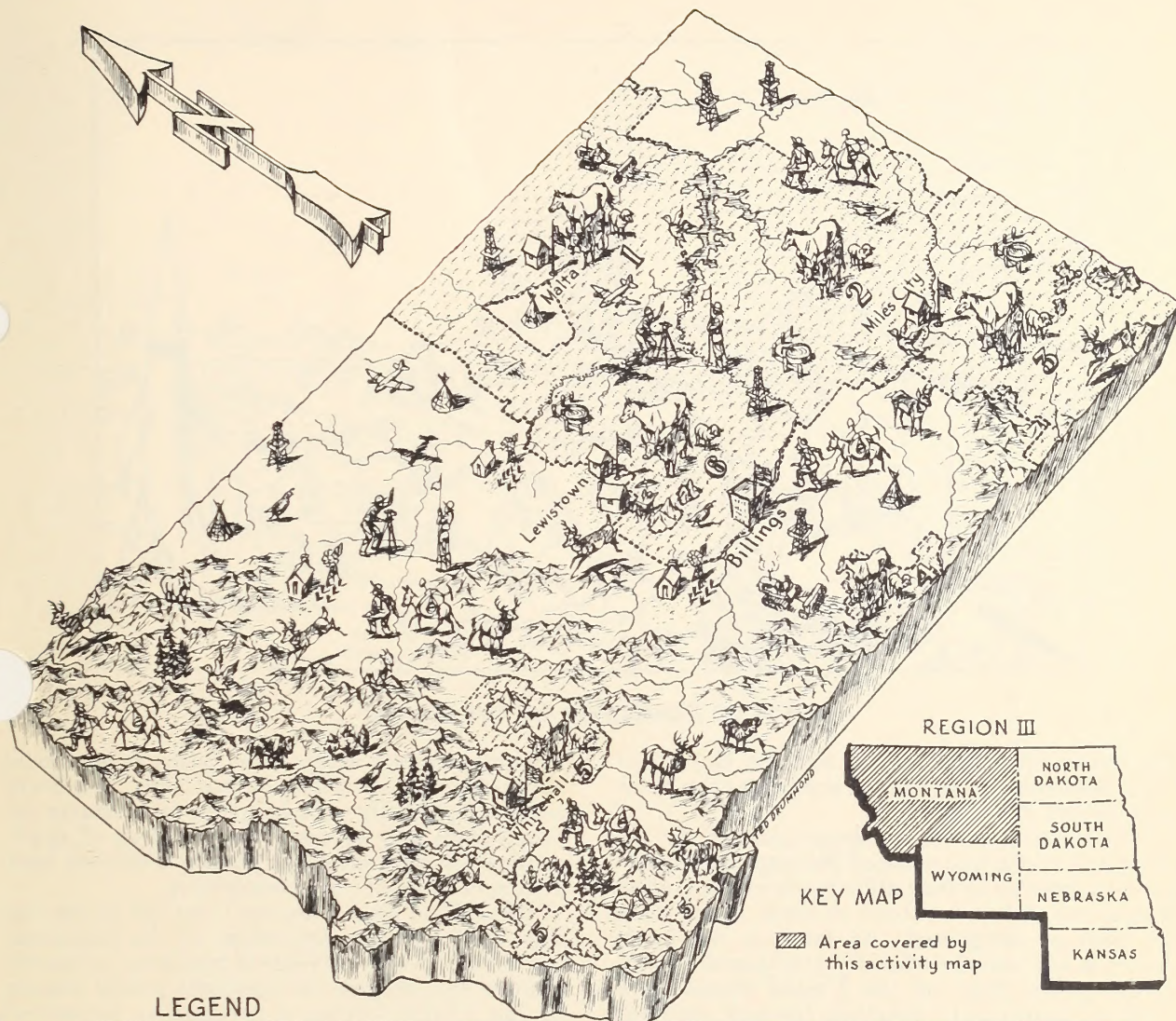
Applications on form No. 4-1158 must be filed in quintuplicate. They must show an adequate description of the lands to be leased, and must be accompanied by the filing fee of \$10 and the first year's rental payment at the rate of 50 cents for each acre or fraction thereof.

When it is determined to go ahead with the development of a lease, the Geological Survey takes jurisdiction over all operations.

A lessee may develop his property himself or designate an operator to do so. . . .

All operations on public-land leases are closely supervised and operators are required to conform to detailed regulations and make periodic reports. The regulations are issued as part 221, Title 30 of the Code of Federal Regulations.

MONTANA LAND-USE AND ACTIVITY MAP



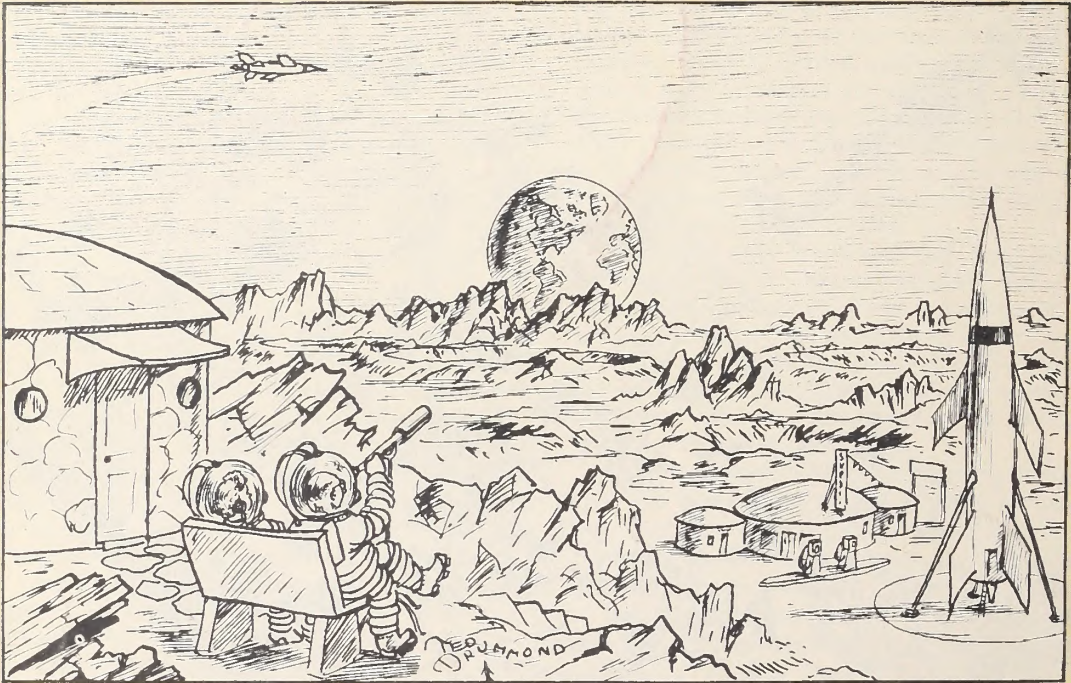
For comments on this map, please see page 16

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IT'S THE LAND LAW



WANT TO HOMESTEAD ON THE MOON?

The letters still keep coming and the Bureau of Land Management still keeps answering the lunar land seekers as follows:

"The jurisdiction of the Department of the Interior and its Bureau of Land Management is confined, in general, to the public lands of the United States, and does not extend to areas which have not been so designated. If land on the moon should at any time be officially proclaimed to constitute public land of the United States as a result of sovereignty obtained through exploration or other means, arrangements doubtless will be made at that time for the administration of the Federal public land statutes in the areas by the Bureau of Land Management. Until such definite arrangements have been officially established, however, this Bureau has no authority to receive applications for land on the moon and

therefore, cannot accept your letter as an official application for such land at this time. No doubt adequate publicity will be given to whatever arrangements may be made for the filing of applications for land on other planets whenever such arrangements have been completed.

"Meantime, your attention is invited to the fact that if the present provisions of the homestead law remain in effect whenever land areas on nearby planets are declared to constitute public domain of the United States, a prospective homestead entryman must present with his application an affidavit that he has personally examined the land sought and is familiar with its characteristics. . . .

From time to time the press takes notice of the Bureau of Land Management's moon file. The most recent article was in the form of a Saturday Evening Post piece in the August 29 issue.

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